

single permanent chief, acting under the direction of the secretary of state, who is responsible for the administration of the law'. This recommendation was realized in 1878 when, on Baker's retirement, Redgrave assumed sole control of the department, a position he held until 1891. However, for the latter part of the period covered by this paper, a period in which significant developments affecting industrial regulation occurred, the ability of the factory inspectorate to ensure uniform administration of the law and to influence government policy was crippled by internal dissension.

IV

Central government inspection is an important facet of a much larger subject – the growth of regulation and of government in nineteenth-century Britain. This paper can only touch the surface of a question which has been long neglected despite the fact that most historians acknowledge the significance of inspection. There is scope for further research, but it is already clear that previous assumptions about the effects of inspection will not do.

Overall, the resources allocated to inspection in the mid-nineteenth century were not of a magnitude to warrant the strong emphasis accorded inspectors either as enforcement officers or agents of government growth. Examination of the impact of factory and mines inspectorates suggests that historians should pay more attention to a phenomenon taken for granted by sociologists of law, namely the distinction between 'law in books' and 'law in action'. It was one thing for an inspecting act to appear on the statute book – quite another for the inspector himself to appear on the shop-floor or at the coalface. Beyond this lies the further question of what influence upon industrial practice could be exerted by inspectors subject to a range of constraints. It is not sufficient to list interventionist statutes, as some historians have done, as evidence of the extent to which *laissez-faire* ideology was breached (or never existed) and government involvement in citizens' lives an accomplished fact in the mid-nineteenth century. It is necessary to demonstrate the extent to which those statutes actually affected people or events by, for example, saving colliers' lives or altering industrial practice. Often, this was the province of the inspector – a man who was, typically, overworked, discontented about his remuneration, mistrusted by employer and employed, invested with inadequate powers, physically removed from his colleagues (with whom he often disagreed) and a believer in the *laissez-faire* philosophy he was, to some extent, undermining.

BRITISH INTELLIGENCE ON THE GERMAN AIR FORCE AND AIRCRAFT INDUSTRY, 1933–1939

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The advent of the Hitler regime in Germany in early 1933, with its emphasis on the overthrow of the Versailles peace treaty restrictions and the re-militarization of German society, caused a fundamental shift in the focus of British intelligence activity. Germany replaced Russia and the Comintern as the primary target.¹ The arm of German military power which commanded the most attention was the Luftwaffe, Germany's new air force. The bomber was the only weapon with which Germany could directly threaten Britain; by which London and the industrial Midlands could be made vulnerable; which could strike at the civilian population. Out of this nexus of strategic anxieties, the air staff created their 'worst-case' assumption. The worst case, as the air ministry consistently saw it during the 1930s, was a massive German air attack launched against Great Britain with the object of forcing a quick surrender, primarily through the collapse of civilian morale. Group Captain J. C. Slessor, director of plans in the air ministry (and a future chief of the air staff), admitted in his memoirs that, 'in those years immediately before the war the possibility of what was referred to as the knock-out blow bore very heavily on the minds of the Air Staff'.²

The professional nightmare of the knock-out blow was matched by a public vision of a future war as an apocalypse – typically the destruction of cities under a lethal rain of poison gas and TNT.³ Not surprisingly, the air question received a great deal of attention in the House of Commons and the press. Yet air warfare on the scale imagined was a technological fantasy, well beyond the capabilities (though not the dreams) of any European air force. The Luftwaffe, in particular, was never capable of mounting an operation approximating a knock-out blow during the 1930s and was not even equipped or trained for such a purpose.⁴

One clue to the problem of how the knock-out blow became an obsession for the British air staff in the 1930s is to be found in the structure and priorities of the air intelligence directorate. Part of a combined directorate, air intelligence

¹ For information on Secret Service activities in the 1920s see C. Andrew, 'The British secret service and anglo-soviet relations in the 1920s', *The Historical Journal*, xx, 3 (1977), 673–706.

² Sir John Slessor, *The central blue* (London, 1956), p. 151.

³ B. H. Liddell Hart, *Europe in arms* (London, 1937), p. 320.

⁴ Williamson Murray, 'German air power and the Munich crisis', *War and Society*, 2 (1977), 107–18; Richard Overy, *The air war 1939–45* (London, 1980).

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was subordinate to operations. The director of air operations and intelligence reported to the deputy chief of the air staff, who passed intelligence appreciations to the chief of the air staff, who was responsible for advising the secretary of state. The information funnel was narrow and hierarchical. The deputy chief of the air staff, probing the defects of this structure in early 1936, reported that 'practically no opportunity exists for mature consideration of the facts which emerge, nor is there anyone beyond the head of the branch to coordinate and link these facts together'.⁵ The air intelligence directorate was divided into numerous sections to cover geographical areas. The minuscule German section, AI 3 (b), concentrated on, and was fully occupied with, the task of keeping track of the size and disposition of the rapidly expanding German air force. In addition to the traditional kind of order-of-battle intelligence, AI 3 (b) attempted to make long-range predictions about the future size of the Luftwaffe. Little effort was devoted to a study of German strategy or aircraft types. As will be discussed later, what information did come to the notice of the air ministry was scanty and failed to solve the question of whether the German air force would be used primarily in support of the army or as an independent bombing force.⁶ At various times the Foreign Office, the French government, and the British air attaché in Berlin advanced the view that the German air force was created as a political weapon to back Nazi diplomacy, implying that it had no strategic doctrine at all.⁷

In theory, the intelligence directorate of the air ministry was the sole body responsible for the co-ordination and analysis of information on the German air force. However, as dissatisfaction with the air ministry's work increased in Whitehall the Foreign Office, which handled a great deal of the open and covert material on which the air ministry relied, and the Secret Intelligence Service (SIS), undertook their own analysis of the German air force. The Industrial Intelligence Centre (IIC) took on the job of studying the German aircraft industry. The Treasury, under Sir Warren Fisher, was a virulent backstage critic. The volume of material still under extended closure at the Public Record Office, lack of access to secret material, and extensive weeding after World War Two inhibit the study of the work of the agencies involved in air intelligence.⁸ It is impossible for the researcher to say, with full confidence, that he knows what his historical counterpart, the intelligence officer, knew at the time. But a clear outline of the intelligence picture survives, amply documented but often shorn of indications of its source and composition, in the records of the air ministry, Foreign Office, committee of imperial defence

⁵ DCAS to CAS, 10 Jan. 1936, Public Record Office, Air 2/1688.

⁶ See below, pp. 641-3.

⁷ O. Sargent minute, 26 Oct. 1934, C7088/20/18, F.O. 371/17695; British air attaché (Paris), 29 Oct. 1934, C7215/31/18, F.O. 371/17713; Vachell despatch, 17 Feb. 1939, C2325/11/18, F.O. 371/22956.

⁸ The records of the joint intelligence committee remain closed; those of the industrial intelligence in foreign countries sub-committee (F.C.I.) are only slowly unfolding under the fifty-year rule; among the missing material are the intelligence handbooks on the German air force compiled by the air intelligence directorate.

and cabinet. The agency least accessible to study is the SIS, all of whose records are closed.

The Secret Service remained a peripheral organization throughout the 1930s, lacking both an effective network of agents inside Germany and any success against the sophisticated German Enigma coding machine. The best intelligence which the SIS gained on German air force developments was obtained through contacts with foreign secret services and through the exploitation of dissident German sources.⁹

Secret Service information formed part of a stream of intelligence which reached the air ministry, Foreign Office and the Industrial Intelligence Centre. Its reception depended, in some part, on the reputation of the Service itself. While prepared to collate SIS reports with other material, the air ministry shared a general service scepticism about their reliability.¹⁰ This attitude was probably the result of a reaction to technically inexact reports, the frustration of dealing with pieces of fantasy (such as the death ray stories), and sheer suspicion of the SIS.

The main intelligence effort, which concentrated on charting the growth of the German air force, reveals marked changes between 1933 and 1939 in its sources, the quality of its estimates, the assumptions under which it worked, and its predictions on the future size of the German air force. Four periods can be discerned. The first (1933-5) can be labelled the period of 'secrecy'; the second (1935-6) the 'honeymoon'; the third (1937-8) 'blindness'; and the fourth (1938-9) 'war scares and war'.

I

The Luftwaffe was a creation of the Nazi government, but they did not have to start entirely from scratch. Under the provisions of the Versailles treaty, Germany was not allowed to possess any military aircraft, but successive German governments had attempted to circumvent the treaty in order to ensure that a German air force could be created quickly in the event of war. The cabinets of von Papen and General von Schleicher felt less restraint over illegal preparations than had their predecessors. In 1932 the German government ordered the Arado and Heinkel factories closed to foreign observers and construction of military planes was begun on a small scale. The air intelligence directorate reported that, in April 1932, Germany possessed 180 military planes, including a training squadron in Russia.¹¹

Between 1933 and 1935 the German air force was built up in direct contravention of the Versailles treaty, at great speed and in conditions of determined, but not foolproof, secrecy. It was not until March 1935 that Hitler decided to dispense with the fiction of the non-existence of the German air force.

⁹ F. H. Hinsley et al. *British intelligence in the second world war*, 1, (London, 1979), chs. 1, II.

¹⁰ Information from Air Marshal Sir Victor Goddard (deputy director of intelligence III, air ministry, 1936-9), interview, 4 June 1980.

¹¹ Report by AI 4, July 1933, Air 2/1353.

This was a convenience which suited both the German government and the British Foreign Office; the latter because they had no desire to force the issue and were especially afraid that the French might provoke a crisis in the League of Nations.¹² The Foreign Office manoeuvre to preserve what they called the government's 'freedom of action' created conditions of great difficulty for the collection of intelligence. After an incident in the summer of 1933, the British air attaché in Berlin had his privileges rescinded and remained in diplomatic isolation for nearly a year. When the German air force was officially proclaimed, the air attaché was the only British official to feel any relief.¹³

The question of the recognition of the German air force was only a minor skirmish in what developed into a full-scale dogfight between the air ministry and the Foreign Office over predictions of the future size of the German air force. The first arena for this battle was in the defence requirements committee (DRC), which consisted of the three chiefs of staff plus three civilians: Sir Maurice Hankey, secretary of the committee of imperial defence, Sir Robert Vansittart, permanent under-secretary at the Foreign Office, and Sir Warren Fisher, head of the Treasury. Their task, in the winter of 1933-4, was to devise for the government new defence programmes to repair the deficiencies which had accumulated under the Ten Year Rule. Despite the fact that no concrete intelligence had reached the air ministry during the DRC's term, the committee nevertheless found itself preoccupied by the question of the future rearmament of Germany, especially in the air. Pushed by Vansittart, the DRC accepted, without conviction, the estimate of five years as the time it would take Germany to rearm, and adopted this as their deadline for British defence planning. Germany was fixed, using Warren Fisher's terminology, as the 'ultimate potential enemy'. When the chief of the air staff presented a very modest programme for the RAF to the committee, both Vansittart and Fisher threatened that they would not sign the report.¹⁴

While Germany represented the obvious enemy for the purposes of air ministry planning, neither the chief of the air staff, Air Chief Marshal Sir Edward Ellington, nor his deputy, Air Vice-Marshal Edgar Ludlow-Hewitt, believed that a German air force could be built so rapidly as to become a threat by 1939.¹⁵ Another reason for proposing only a modest programme was that the senior air staff did not wish to rush their re-equipment and endanger the elite force which had been preserved so carefully during the 1920s.¹⁶

The RAF proposals satisfied no one outside the air ministry and had already come under attack in the cabinet disarmament committee when the first significant piece of intelligence on the German air force reached the air

¹² Memorandum on a conference at the F.O., 7 July 1933, Air 2/1353.

¹³ Don to Courtney, 27 Mar. 1935, 'I feel that after these frank discussions in Berlin I shall cause no diplomatic embarrassment if I happen to see a war aeroplane', Air 2/2708.

¹⁴ The records of the DRC meetings, which provide a useful insight into early attitudes towards the German threat, are in P.R.O. file CAB 16/109; DRC 12th meeting, 26 Feb. 1934 CAB 16/109.

¹⁵ Minute by DCAS to CAS, n.d. [May 1934], Air 9/24.

¹⁶ See T. E. Lawrence (Aircraftman Shaw), *The mint* (London, 1935), for a picture of the RAF in the early 1930s.

staff. The air intelligence directorate learned, in late March 1934, from the French *Deuxième Bureau*, details of the German air force programme for October 1935, codenamed the 'Rhineland programme'. The report stated that Germany intended to form a force of about 500 first-line aircraft, and that this strength comprised the first of three or four air divisions which was Germany's ultimate goal.¹⁷

The new intelligence did not shake the air ministry's conviction that their proposals were adequate. The minds of the senior officers of the air staff were dominated by the concept of 'efficiency' and their views were faithfully echoed in the cabinet by the secretary of state, Lord Londonderry. Efficiency was regarded not only as a German national characteristic, but as a necessary approach to the formation of the highly technical weapon which the modern air force represented. Aircrew training to the necessary degree of skill, the creation of support services (ground crew and administration), the building of aerodromes and barracks, and the stockpiling of reserves were cumulatively seen as factors which would govern the pace at which the German air force could expand. Both Ellington and his deputy agreed that the maximum rate at which Germany could expand would be to form the first air division (500 planes) by the end of 1935, the second (1,000 planes) at the end of 1939, a third (1,500 planes) in 1942 and a fourth (2,000 planes) in 1945.¹⁸ Even then, Ellington told the cabinet, assuming that the Germans were aiming at a reasonable degree of efficiency, he did not think they would match the RAF standard before 1945.¹⁹ The deputy chief of the air staff wrote that 'a nation so admittedly thorough as Germany will not be content with a mere window-dressing collection of aircraft and pilots'.²⁰

The clash of political and military intelligence in the DRC had encouraged the central department of the Foreign Office to begin drawing up their own appreciations of the German air force. The Foreign Office reaction to the air ministry's estimate of the future size of the German air force was uniformly sceptical. The air staff were regarded as too conservative and too complaisant. Vansittart was chagrined that the air staff would not accept his estimate of 1939 as the year of menace. He wrote, 'I have lost all faith in the Air Ministry estimates and consider them dangerous - both at home and abroad'.²¹

The RAF programme which was eventually set by the cabinet, led by Neville Chamberlain, was for seventy-five squadrons, to give parity with the air ministry estimate of the German air force of two air divisions in 1939.²² Less

¹⁷ Memorandum by the air staff, 'Air defence requirements...', 29 May 1934, circulated as D.C. (M) (32) 115, CAB 16/111. French possession of the details of the Rhineland programme, which was devised in Jan. 1934 and called for the production of 3,715, later raised to 4,021, aircraft during 1934-5, suggests that they had an excellent source in the German air ministry. On the evolution of the Rhineland programme see E. L. Homze, *Arming the Luftwaffe* (Lincoln, 1976), pp. 79-87.

¹⁸ Memorandum prepared for the secretary of state for air, 5 July 1934, Air 9/69.

¹⁹ 'Air defence requirements...', 29 May 1934, D.C. (M) (32) 115, CAB 16/111.

²⁰ Appreciation by the DCAS, July 1934, Air 9/69.

²¹ Minute by Vansittart, 19 June 1934, C3511/31/18, F.O. 371/17712.

²² C.P. 205 (34), July 1934, CAB 16/110.

than four months later, a new RAF programme was announced in the House of Commons. It was designed as a response to the second major piece of intelligence on the still secret Luftwaffe to come into the hands of the air ministry. The source was, once again, the French *Deuxième Bureau*. Their report contained details of a new German air force expansion plan which aimed at a first-line strength of 1,300 planes by October 1936.²³ This information, which indicated a size for the German air force which the air staff had so recently predicted could not be reached before 1942, struck the first of a series of blows to the conviction that efficiency would be an important limiting factor on the rate of expansion of the German air force.

When Hitler, in March 1935, turned the unveiling of the Luftwaffe into a propaganda exercise by claiming that Germany had reached parity in air strength with Britain, the moment was typically well timed. The air staff had already suffered a shock over their intelligence predictions and felt themselves to be under attack by the Foreign Office, who were encroaching on the sole right of the air ministry to make military intelligence estimates, and at the mercy of politicians who did not understand that you couldn't pull an air force out of a hat.

The events surrounding Hitler's parity claim did have a strong element of the conjuror and his audience, an echo of Mann's *Mario and the Magician*. Everyone added to Hitler's smoke. Vansittart authorized the leakage of Hitler's claim to the press.²⁴ Stanley Baldwin, in a piece of political dirty work which was perhaps justified by its end, used the opportunity to sack Londonderry and publicly put the blame on air intelligence for misleading the government.²⁵ When the smoke cleared both the government and the air ministry understood that Hitler had been bluffing and that his air force had scarcely begun to emerge from its training schools.²⁶ The air intelligence directorate found itself revising upwards, once again, figures on the rate of expansion of the German air force. They believed that an acceleration of the October 1936 programme had been forced upon the German air ministry by Hitler's parity claim, which was understood to have surprised the German air ministry as much as it had the British. The new prediction was that the Luftwaffe might form its first three air divisions, with a strength of 1,500 planes, by April 1937. No further expansion was expected to take place after that date because, in the air staff opinion, a period of consolidation would be required to make the German air force efficient and war-ready. Still thinking according to a pattern established by their earliest responses to a reborn Luftwaffe, the air staff now believed that the brake which efficiency would apply would come after a rapid period of

²³ Despatch by the military attaché, Paris, 24 Oct. 1934, Air 2/1355. The French swore the military attaché to the utmost secrecy and would have been horrified to learn that the despatch was printed and given wide circulation, by mistake.

²⁴ Lord Vansittart, *The mist procession* (London, 1958), p. 498.

²⁵ See the excellent account of these events in Martin Gilbert, *Winston S. Churchill* (7 vols., London, 1976), v, 450; H. Montgomery Hyde, *Baldwin, the unexpected P.M.* (London, 1973), p. 382; Lord Londonderry, *Wings of destiny* (London, 1943), pp. 127-32.

²⁶ First interim report of the air parity sub-committee, 13 May 1935, C.P. 100 (35), CAB 24/255.

initial expansion.²⁷ The prediction of a German air force with an ultimate strength of three to four air divisions was, in fact, based on the flimsiest of evidence. It was drawn from a report on a German air staff exercise on paper which had employed that size of force.²⁸ The directorate of air intelligence clung to this estimate steadfastly until September 1936, in circumstances which make their reasoning seem increasingly absurd.

When Hitler announced his parity claim, in conversation with two British cabinet ministers, he also produced a chart showing the relative strengths of the European air forces which contained greatly inflated figures. He told the two ministers that his goal was parity with France, whose strength the chart listed as 2,091 first-line aircraft.²⁹ As virtually all of Hitler's figures were wrong, the air staff were prepared to believe that the goal of the German air force was indeed parity with France but expected that they would only expand to the real size of the French air force, which was, conveniently enough, the magic figure of 1,500.³⁰ The secretary of state for air urged the Foreign Office to tell Hitler that he had got his figures wrong. The British ambassador in Berlin, Sir Eric Phipps, supported the idea.³¹

The Foreign Office central department, led by Vansittart, were astounded by the naivety of the air ministry and furious about the paper which the secretary of state for air had put up to the cabinet on the comparative situation of the British and German aircraft industries. Vansittart regarded it as a gloss; his temper got the better of him and he minuted on the air ministry report: 'a most unsatisfactory document... I hope that this grave matter will no longer be left in the hands of the Air Ministry alone'.³² A vigorous battle of half truths began. The air ministry were correct to think that Hitler was exaggerating the present size of the German air force but they were wrong in their assumption about a period of consolidation being necessary after 1937. Vansittart argued that Hitler's figures were better than those of the air ministry. In his own paper for the cabinet Vansittart regarded the air staff's estimate that no further German expansion would take place after 1937 as making 'a wish father to a comfortable thought'. He concluded that the air ministry were failing to put forward energetic proposals to ensure that the RAF maintained parity with the Luftwaffe. He indicted them in ringing prose.

Parity was promised and no one has ever before suggested either to the Foreign Office or the public that we must wait four years and even then run the risk of not attaining so simple and vital a prerequisite. And these four years may be the most crucial in the history of Europe, indeed they will probably decide its fate. If a clear foreign policy

²⁷ Ibid.

²⁸ The intelligence was reported in an appendix to the first DRC report, C.P. 205 (34), July 1934, CAB 16/110.

²⁹ 'Note of Anglo-German conversations...', Mar. 1935, C.P. 69 (35), CAB 24/254.

³⁰ Memorandum by the CAS, 'The German air programme...', 17 Apr. 1935, C.P. 85 (35), CAB 24/254.

³¹ Phipps to Hoare, 20 Nov. 1935, C7789/55/18, F.O. 371/18851.

³² Minute by Vansittart, 29 Apr. 1935, C3614/55/18, F.O. 371/18838.

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is adequately backed, there need be no fear of the future. There is much to fear if this is not the case; and it cannot, I submit, be the case on these dates and figures.³³

Ramsay MacDonald, the ageing prime minister, had to cool tempers down by telling the two protagonists that the situation was too serious for inter-departmental feuding.³⁴ A special cabinet committee was set up in July 1935 to examine the air parity question. The air ministry case was accepted and the prediction of 1,500 German first-line aircraft by 1937 was adopted as the relevant standard. But the committee warned that the situation must be carefully watched and urged that extra funds be provided for the Secret Service.³⁵ Over the question of long-range predictions neither the air ministry nor the Foreign Office emerged as a clear winner.

By this stage (July 1935), three different shades of definition of the term air parity had arisen to throw confusion into the strategic issue of the comparative size of the RAF and the German air force. Stanley Baldwin had pledged the government to maintain parity in air strength with any country within striking distance.³⁶ This one power standard was commonly understood to refer to equality in total first-line strength. Cabinet ministers believed that it was impossible to justify any other definition in public.³⁷ The air staff had, from the time of the chief of the air staff's paper on Germany in early 1934, argued that parity was only meaningful in relation to the size of the bomber force.³⁸ The Foreign Office regarded numerical parity as the wrong test. The real standard, they believed, should be a comparison of the capacity to manufacture machines and to train pilots.³⁹ The three shades of definition served a common concept of deterrence. It was axiomatic in British defence thinking that a commitment to air parity would act as a deterrent against a German knock-out blow. The linkage was simple. As Neville Chamberlain told his cabinet colleagues: 'it would be necessary to convince the House of Commons and Germany that we had a very good striking force... which could hit very hard'.⁴⁰

The first period of intelligence on the German air force, the 'secret period', was characterized by two important intelligence coups – the knowledge of the German October 1935 and 1936 programmes – whose benefits were lost owing to the conservative predictions of the air staff, their obstinate defence of those predictions and their naivety about the way an air force could be built up in Nazi Germany. That the principle of efficiency would be an important limiting

³³ Comments by Vansittart on C.P. 85 (35), 24 Apr. 1935, D.C. (M) (32) 139, CAB 27/511.

³⁴ Air parity sub-committee, 1st meeting, 1 May 1935, CAB 27/518.

³⁵ First interim report of the air parity sub-committee, 13 May 1935, C.P. 100 (35), CAB 24/255.

³⁶ Parliamentary Debates, House of Commons, 5th series, ccvc, cols. 872–3.

³⁷ This was the argument used in the disarmament committee, 10 May 1935, DCM 62nd meeting, CAB 27/508.

³⁸ Memorandum by the CAS, 'The potential air menace to this country from Germany', 12 June 1934, COS 341, CAB 53/24.

³⁹ Minute by Wigram, central department, 13 Nov. 1935, C8332/55/18, F.O. 371/18852.

⁴⁰ DCM 63rd meeting, 20 May 1935, CAB 27/508.

factor in the expansion of the German air force was still central to air staff thinking in the summer of 1935. A second assumption which underpinned intelligence predictions in the first period, a necessary condition for the pursuit of parity, was that British aircraft production could keep pace with Germany.

The first authoritative report on the German aircraft industry was written by Major Desmond Morton's Industrial Intelligence Centre (IIC) in March 1934. The IIC was created as a secret unit in 1931 to collect and evaluate information on industrial war planning in foreign countries. At first the IIC concentrated on Russia but soon turned its attention to the German aircraft industry to produce what became a series of bi-annual reports for the CID on the state of that industry. Despite its small staff, the IIC developed, under Morton's command, into the most professional and centralized intelligence-gathering agency in Whitehall in the thirties. Their sources included material from industrial publications, statistics from the board of trade and department of overseas trade, Foreign Office reports, information volunteered by British industrialists and whatever covert material was supplied by the Secret Service.⁴¹

In March 1934 the IIC reported that German aircraft production had increased by fifty per cent in the year since Hitler came to power. The IIC warned that once difficulty with engine design had been overcome, German industrial capacity and the mobilization measures which had been adopted would 'at no very distant date once more make Germany a formidable military factor on the continent'.⁴² Their November 1934 report indicated even more remarkable progress. Germany's production output and labour force had more than doubled in a period of six months. German innovations in manufacturing aeroplanes by components and the use of assembly line techniques were noted.⁴³ An early conclusion drawn by both the IIC and the air staff was that German industrial capacity was potentially so vast that it would not be among the factors tending to limit the ultimate size of the German air force.

*But, what was strategy/goal of German in? (like SU)
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The second period of British intelligence, the 'honeymoon', opened in June 1935 with the first invitation accorded to the British air attaché in Berlin to visit German aerodromes, training stations, and aircraft factories. The honeymoon period lasted for a little over a year, from the summer of 1935 to the end of 1936, and was marked by German manoeuvres over exchanges of information and the growth of an atmosphere of understanding between the two services.

⁴¹ IIC – air ministry correspondence file, Air 5/1154; Robert J. Young, 'Spokesman for economic warfare: the industrial intelligence centre in the 1930s', *European Studies Review*, 6 (1976), 473–89; Hinsley, *British intelligence*, 1, 60–1.

⁴² FCI report, 22 Mar. 1934, CID 1134-B, CAB 4/22.

⁴³ IIC – air ministry paper, 'The German aircraft industry', 5 Nov. 1934, CID 1151-B, CAB 4/23.

RAF programmes, in this period, continued to be formulated on the basis of parity in numbers with the German air force. A major government re-examination of British defence planning took place in the aftermath of Hitler's air parity claim. The defence requirements committee was reincarnated to make recommendations for the future. The third DRC report, ready by the end of November 1935, reaffirmed the 1939 deadline for defence preparations and featured an RAF programme which was described as the maximum which could be undertaken without interference with industry. A new note of uncertainty was struck, compared to the first DRC report, in the conclusion:

We know something of Germany's industrial development and capacity, but it would be a dangerous illusion for us to infer that we have a reliable measure of what she can do, still less of what she may do in the near future. The best that we can do is to strengthen our intelligence system and our own war potential, so as to be able to increase our forces correspondingly in the case of a German increase.⁴⁴

The DRC recognized, for the first time, that Britain might be at a serious disadvantage in regard to aircraft production relative to Germany. Confirmation of the DRC's fears was soon to materialize in intelligence reports from a unique source.

In February 1936 the air intelligence directorate began to tap, at first most reluctantly, what was to be their single most important source of information on the German air force, a retired group captain named Malcolm Grahame Christie. Christie had been air attaché in Berlin from 1927 to 1930. In retirement, he was a wealthy businessman who maintained excellent contacts with Goering, his deputy Erhard Milch, and the German air ministry, as well as a whole host of men in German politics.⁴⁵ Beginning in December 1933 Christie established himself as an unusually well-informed source on events in Germany. He sent reports privately to Vansittart, eluding German security measures by writing from locales, often expensive hotels, outside Germany. He was not a spy, in the usual sense of the word, because he was neither paid nor controlled by anyone. Vansittart, who laid the foundations of his own intelligence network, separate from the SIS and the Foreign Office, on Christie's information, described him to Hankey as 'the best judge of Germany that we shall ever get'.⁴⁶ Many of Christie's reports were on political and economic matters and on personalities in Germany. He was not an infallible guide, but at times he was able to inform the British government of German plans. The night before the Rhineland occupation he telephoned Vansittart in his Park Lane home with detailed information on the German timetable and the strength of the occupying force.⁴⁷ During the summer of 1938 he was

one of the Foreign Office's most valuable sources on the German plans for an invasion of Czechoslovakia.⁴⁸

One cryptic document survives in the Christie papers at Churchill College which indicates his sources. It reads:

Gord of little value now - scared and doubting. Best informed sources X and Dr. Y per Catholic Church, General Staff and Adolf's immediate entourage.

Z with roots in Paris, General Staff and Embassy. Debts now paid off.⁴⁹

The identities of Christie's sources remain obscure. He obtained his information on the German air force from X, an unidentified senior official in the German air ministry.⁵⁰

Christie's first major report on the German air force reached the air ministry in February 1936.⁵¹ The Foreign Office had forwarded it, telling them only that it came from 'the most secret and best informed of their sources in Germany'. The report consisted of a document on the organization of the German air force plus appended tables showing projected strengths on 1 April 1936 and 31 December 1938 and giving figures for German aircraft production. The air intelligence directorate treated this information with excessive professional scepticism, perhaps because it came from the Foreign Office. They rejected the future strength figures on the grounds that there were too many 'political unknowns' to allow predictions to be made. The chief of the air staff, Ellington, was ready to dismiss the intelligence altogether. He wrote, in a minute to the secretary of state for air, that the document was 'someone's deductions from part of the information at the Air Ministry's disposal'. The secretary of state, Lord Swinton, clearly knew better, for he red-penned Ellington's minute with a 'No' and instructed the chief of the air staff to see him about it immediately.

There followed what must be one of the most absurd dialogues between headquarters and agent in the history of espionage. A questionnaire was prepared for X criticizing his figures. A reply was promptly received from X (with Christie acting as the essential go-between) in March 1936, defending the figures as 'official and correct' and adding information, as a fillip, on the latest series of engines installed in the Dornier 17 bomber.⁵² AI 3(b), the German section, was even more sceptical than previously. They stated that they were not prepared to accept 'this unsubstantiated statement' and were

⁴⁸ Memorandum by Vansittart on the Sudeten crisis, 12 July 1938, C7009/1941/18, F.O. 371/21727; Strang to Henderson, 21 July 1938, C7315/1941/18, F.O. 371/21728.

⁴⁹ Christie papers, CHRS/1/17.

⁵⁰ Norman Rose, *Vansittart: study of a diplomat* (London, 1978), pp. 136-8. While giving some useful information on the Vansittart-Christie network, Rose wrongly identifies X (a common code-name) as Carl Goerdeler.

⁵¹ Most secret document, 'Organisation of the German air force, December 1935', received by the air ministry 12 Feb. 1936. Christie's 1936 reports and the air staff response to them are contained in a file entitled 'F.O. source secret X documents on the German air force', Air 40/2102. Duplicates are usually to be found in the Christie papers.

⁵² X reply to questionnaire and 'Notes on German aero-engines', 10 Mar. 1936, Air 40/2102.

⁴⁴ Third DRC report, Mar. 1936, D.P.R. (DR) 9, CAB 16/123.

⁴⁵ See introduction to a biography of Christie: T. P. Conwell-Evans, *None so blind* (London, 1947). Only 100 copies of this work were printed but a copy is in the B.L.; Christie papers, Churchill College, Cambridge.

⁴⁶ Vansittart letter to Hankey, 22 May 1935, CAB 21/540.

⁴⁷ Christie papers, CHRS/1/17.

unwilling to go into details about future German expansion. They thought that Germany intended to reach a strength of 1,500 planes by April 1937 and a strength of 2,000 as soon as possible afterwards. After a further communication from X the air staff became truculent. Regarding X's statements on fluctuations in German aircraft production, AI 3 (b) commented, 'we do not believe that Germany with her ability and love of good organization would adopt the methods which X states she has adopted'. The director of air intelligence wrote to the chief of the air staff that they weren't interested in arguing about the German air force with X. They couldn't accept his deductions without knowing the source. But they added that they hoped X would pass on any information which reached him. The Christie-X file was thus left open a crack, in the hope that further information might arrive in the form of raw material rather than contentious analysis.

Christie's last report in 1936 found the air staff in a much more receptive mood; they regarded it as 'most useful information'. The report gave a detailed analysis of the new generation of aeroplanes with which the German air force would be equipped, including information on the twin-engined Messerschmitt 110 fighter, of which the intelligence directorate had heard nothing. The report also contained the statement, the significance of which was overlooked, that the Germans had ceased development of a four-engined bomber and were concentrating on high-performance medium bombers instead.⁵³

Throughout the first nine months of 1936, the air staff refused to commit itself on predictions of German air strength beyond April 1937. A belated revolution occurred in September 1936 when the directorate of air intelligence produced a paper on the future of the German air force.⁵⁴ Under the combined pressure of the Christie-X intelligence and other confirmatory information, the orthodox picture of the Luftwaffe was abandoned. The idea that the Germans would not expand in air strength beyond a figure giving them parity with the French was dropped. With it went the notion that a period of consolidation must follow the initial phase of rapid expansion and that, therefore, no further German air force units could be added to the order of battle between 1937 and 1939. By implication, the air staff recognized that their chances of attaining parity with the German air force in 1939 were lost.

Ralph Wigram, head of the central department of the Foreign Office, commented on the air intelligence paper that 'the cat seems to be out of the bag at last - the Germans are going to have the biggest air force they can'.⁵⁵ The new intelligence prediction was for a German strength of 2,500 planes by April 1939. The Foreign Office believed that the air ministry was finally beginning to produce realistic estimates, but they feared that the necessary steps

⁵³ X report, 'Development of new aero-engines and military aeroplanes in Germany', 14 July 1936, Air 40/2102.

⁵⁴ Memorandum by Medhurst, deputy director of intelligence, air ministry to F.O., 11 Sept. 1936, C6429/3925/18, F.O. 371/11946; CID 1265-B (restricted circulation), 6 Oct. 1936, CAB 4/25.

⁵⁵ Minute by Wigram, central department, 18 Oct. 1936, C7044/3928/18, F.O. 371/19947.

were not being taken to match Germany in aircraft production. Vansittart organized another leak of information to the press, similar to that which had taken place during the Hitler parity claim excitement, in order to force the government to act.⁵⁶

After the mauling it had received from Baldwin and the Foreign Office in the spring of 1935, the air intelligence directorate developed a natural reluctance to commit themselves over long-range intelligence predictions. But this only partly explains why the directorate was slow to accept the new intelligence available in 1936 on the further expansion of the German air force. Co-operation between the air ministry and the IIC had become close by 1936 and the intelligence directorate had begun to realize the way in which industrial intelligence could signal future intentions. Estimates made by the IIC in 1936 showed that the rate of expansion of German aircraft output had slowed considerably and that problems were beginning to be experienced with raw materials and skilled labour supply.⁵⁷ The air ministry prematurely interpreted this as suggesting that the phase of the expansion of German industry was completed and that, therefore, the German air force would not undertake any new programmes of growth. In fact, the slowdown which the IIC registered was caused by continuing difficulties with the production of aero-engines. The final IIC report of 1936 showed that German aircraft production was once again rising rapidly, confirming the air staff's new intelligence picture of Germany aiming for a very large air force.⁵⁸

III

The third period of intelligence, the period of 'blindness', lasted from 1937 to the Munich crisis of September 1938. Although the period opened with the visit to Germany of a senior RAF mission, in the spirit that had marked the 'honeymoon' time, relations between the two services began to cool when the British air ministry discovered that General Milch had tried to hoodwink them with his dramatic revelations of German air force strength. The Milch figures, which showed an unexpectedly moderate rate of Luftwaffe expansion, were subsequently incorporated in the mission's report, causing the abandonment of a projected expansion scheme H. However, by the summer of 1937, air intelligence regarded the Milch figures as fraudulent and began to describe him as a 'slippery' character.⁵⁹

This period of events was marked by an increasing concern about the quality of British intelligence, combined with a dearth of information about future German plans. Reliable estimates of current German strength indicated that the RAF was falling dangerously behind. The optimism that had been such

⁵⁶ Minute by Vansittart, 18 Nov. 1936, C8249/3928/18, F.O. 371/19947.

⁵⁷ IIC - air ministry reports on the German air force and aircraft industry, CID 1218-B, CID 1250-B, CID 1284-B, 1936, CAB 4/24 and 25.

⁵⁸ 'German aircraft industry', 30 Nov. 1936, CID 1284-B, CAB 4/25.

⁵⁹ Medhurst to F.O., 23 June 1937, C4781/185/18, F.O. 371/20734.

a strong and distorting factor in earlier air intelligence predictions gave way to pessimism.

Serious delays in the handling of information inside the directorate of air intelligence in early 1937 led to a full-scale investigation. The German section was singled out as being in a particularly bad state. The air ministry secretariat reported that they found that the German section had fallen behind in its work and was unable to complete the intelligence handbook on the German air force. The squadron leader in charge admitted that his section 'lived from hand to mouth'.⁶⁰ The Treasury agreed to make funds available for a large increase in staff, but with bad grace, asking the air ministry for an assurance that they had some comprehensive plan in mind for their intelligence directorate.⁶¹

Increases in staff could not solve the problem of lack of information and by the spring of 1938 the air staff was experiencing its biggest information slump. The secretary of state called the chief of the Secret Service, Admiral Sinclair, into a conference. Confessions were offered on all sides. The deputy director of intelligence admitted that the lack of up-to-date and reliable information on the German air force extended to all branches of the study of it: organization, strength, armaments, and other technical details of vital importance such as range and bomb-carrying capacity. He told the chief of the air staff that 'we are working in the dark'. Admiral Sinclair, with typical circumspection, stated that owing to circumstances beyond his control a very serious situation had developed in the last few months.⁶²

By the time of the Munich crisis, information on the German air force was still far from complete. The director of air intelligence, in making an emergency request to the War Office for the loan of three experienced officers, was forced to the blunt conclusion that much of the fault lay in the quality of the intelligence staff.⁶³

The only light to break in on this darkening scene came from Christie; the last piece of pre-war intelligence on the German air force that he was able to send and once again based on information from his source X in the German air ministry. Christie's report, dated 31 May 1937, gave full details of a new expansion plan which aimed at the completion of 360 squadrons by the end of 1939.⁶⁴ The response of the air intelligence directorate, this time around, was ecstatic. While eager to know something of the means of access of X to German state secrets, they accepted the report as genuine and remarked that 'it cannot be doubted that this writer is in possession of a great deal of accurate and valuable information'. Pleas for more information from X were sent in November 1937 and February 1938 but to no avail. Christie's intelligence on the German plans for 1939 was used in the formulation of a new RAF

expansion programme, scheme J, and remained the basis of all air staff predictions up until the outbreak of war.⁶⁵

The first, ambiguous evidence about German air strategy began to arrive in 1937. In the early years of its development, the Luftwaffe resembled a vast training camp. Many of its officers were recently transferred from the army; its equipment was obsolescent military or converted civilian planes churned out by the rapidly expanding aircraft industry. Service Manual 16, the first handbook on the strategical and tactical employment of the German air force, was not issued until 1936. And it was in this same year that the Luftwaffe took part, for the first time, in combined training manoeuvres with other branches of the German military.⁶⁶

The British appreciation of probable German air strategy had become deadlocked in the chiefs of staff committee in the summer of 1934, following an argument in which the chief of the imperial general staff insisted that, on the basis of his sources, the German air force was being developed to support the army, while the chief of the air staff argued that it was being developed with a strategic offensive in mind.⁶⁷ The deadlock was broken by the arrival of evidence which suggested that the Luftwaffe was being developed with a capability for both tactical and strategic operations. In June 1937 the air ministry obtained from the French secret service a copy of a document which purported to be a German air staff analysis of the 1936 war exercises. Three types of missions were envisaged for the German air force: surprise attack to destroy enemy air forces on the ground, co-operation with the army, and attack on enemy resources and industry. The latter was regarded as potentially exercising a decisive influence on the course of the war. But the document also stated that the bomber force must support the army in its critical battles and that attack on distant objectives must only be made if they would have an immediate effect on the outcome of the land battle.⁶⁸ Sir Maurice Hankey minuted on a copy which went to the prime minister that the document contained nothing unexpected and 'indicates that the Germans would conduct air warfare on much the same lines as we should ourselves'. The British air attaché's report on the 1937 war exercises (a grandiose spectacle with, at times, fatally real conditions) carried the same message of a dual role for the German air force. Group Captain Don wrote that the German bomber formations were available for long-distance operations on towns and industry as well as being trained to 'operate closely with the army in its task of swift advance by motorized and mechanized forces'.⁶⁹

⁶⁰ S1 to Reynolds, 4 Mar. 1937, Air 2/1688.

⁶¹ Treasury to Air council, 27 Apr. 1937, *ibid.*

⁶² Deputy director of intelligence to S1, 21 June 1938, *ibid.*

⁶³ Deputy director of intelligence to S1, 10 Sept. 1938, *ibid.*

⁶⁴ The Christie-X material for 1937-8 is contained in a most secret air ministry file, 'Information forwarded by Sir Maurice Hankey', Air 40/2043; X documents, 'Notes on Germany's Air force programme', 31 May 1937 Air 40/2043.

⁶⁵ The Christie-X information was given restricted circulation in a cabinet paper, 'Progress of German Air rearmament', 6 July 1937. D.P. (P) 7, CAB 16/182.

⁶⁶ On the history of the Luftwaffe see: Homze, *Arming the Luftwaffe*; H. Schliephake, *The birth of the Luftwaffe* (London, 1971); and Richard Suchenwirth, *The development of the German air force 1919-1939* (New York, 1968).

⁶⁷ COS 130 and 132 meetings, 27 June 1934 and 24 July 1934 CAB 53/4-5.

⁶⁸ Translation of Deuxième Bureau report contained in Hankey to Baldwin, 7 July 1937, CAB 104/32.

⁶⁹ Despatch by Don, air attaché in Berlin, 7 Oct. 1937, C6966/136/18, F.O. 371/20731.

One indication of the way in which military and political intelligence was often inter-mixed is revealed in the air staff's attempt to penetrate the German debate over the use of air power. Advocates of the knock-out blow were sometimes identified with the 'extremist' wing of the Nazi party.⁷⁰ General Goering was reported to be an enthusiast of the knock-out blow, at odds with the more conservative General Staff, who wanted the air force to concentrate on the role of ground support for the army.⁷¹ During 1937 the German air attaché in London confided to an intelligence officer that the German army was pressing the lessons of the Spanish civil war, which they regarded as showing the value of air support, on the Luftwaffe.⁷² The British reading of that gruesome laboratory of modern weapons and tactics did not indicate any such unambiguous lessons.

A sub-committee of the joint intelligence committee had been set up in May 1937 to study the Spanish civil war. Service ministers who attended a special session of the chiefs of staff committee to discuss a preliminary set of reports heard a great deal about the difficulties of collecting intelligence in Spain but also learned that the major employment of air forces had been against troops, that columns of mechanized transport were particularly vulnerable to air attack and that the German contingent in Spain included a strong anti-aircraft detachment for the protection of the airfields of the Condor Legion.⁷³ More comprehensive papers on the Spanish civil war were not available until June 1939, by which time the chiefs of staff were too busy with the European situation to study them.

The picture of German air strategy distilled from the war exercises and the Spanish civil war was inconclusive, and indicated that the German air force would have both an army support and a strategic bombing role. On this basis a German knock-out blow could not be dismissed. What was missing from the intelligence picture was an estimate based on German capabilities. Technical intelligence on the Luftwaffe was extremely poor, reaching its nadir, significantly, during the period of the Munich crisis.

When the air intelligence directorate was requested to make an urgent appreciation of the German bombing potential, in late August 1938, their report showed that they were uncertain of the bomb loads and ranges of the principal German bombers – the Heinkel 111 and the Dornier 17. From conflicting information, maximum estimates of the capabilities of the German bombers were taken in conformity with the worst case assumption. The German section speculated that, at most, only some 50 per cent of the German long-range bomber force could be sent against England, because of army requirements for a war against Czechoslovakia. Nevertheless, for the purpose

⁷⁰ Summary of SIS information, 19 Jan. 1939, FP (36) 74, CAB 27/627.

⁷¹ Memorandum by AI 3, 24 Aug. 1938, Air 9/90; Vansittart to Hankey, 22 May 1935, CAB 21/540.

⁷² Note by Group Captain Goddard (AI 3), 15 Apr. 1937, Air 2/2797.

⁷³ The first set of JIC reports are contained in COS 622-4 (JIC), 6 Oct. 1937, CAB 53/33; A special meeting was held to consider them on 19 Oct. 1937, COS 219 meeting, CAB 53/8.

of calculating the tonnage of bombs which might be dropped and the destruction German air attack could cause, they worked on the assumption that all German long-range bombers would be directed against England. Again, this was done on the overt basis of the worst case.⁷⁴ An air staff report for the secretary of state, reproducing the intelligence directorate's findings, indicated that the scenario of the entire German bomber force being sent against England was unlikely, but concluded that it was 'vain to attempt any estimate of what proportion of their striking force they will be able to direct against Great Britain'.⁷⁵ During the Munich crisis the worst-case assumption operated in the circumstances of a severe shortage of intelligence and in an atmosphere in which doubt encouraged exaggeration.

While intelligence estimates were made in the scorched light of the worst case, planning went ahead under more realistic conditions. The chief of the air staff told bomber command that the most likely German strategy would be to direct the main weight of land and air attack against Czechoslovakia, while staying on the defensive in the west. Air action against England was expected to be confined initially, at most, to diversionary attacks on a limited scale against purely military targets such as aerodromes, warships and naval bases.⁷⁶

The cabinet was given no precise picture of the probable German employment of air power during the Munich crisis. The chiefs of staff neither pronounced a knock-out blow likely or unlikely but left the issue, in effect, to the imagination of ministers. The cabinet were well aware that, in the event of a German air offensive, the RAF was hardly combat-ready and air raid defence almost non-existent. Neville Chamberlain was only reflecting a common chunk of public imagination when, after returning from Berchtesgaden, he told his cabinet colleagues that as he flew over London all he could think of was the city below being laid waste by bombs.⁷⁷ Yet, by this stage in the crisis, the German air staff had come to the conclusion that a knock-out blow against Britain was impossible.

General Felmy had been appointed head of a special Luftwaffe staff to study, for the first time, the problems of air attack against England. He reported to Goering on 22 September that a 'decisive war against England appears to be ruled out with the means now available'. Felmy's study stressed that operations against England would require advance bases in the Low Countries; German aircraft did not have sufficient range nor the crews adequate training in over-water flights and long-range bombing missions.⁷⁸

The situation which arose at Munich, in which Britain was out-deterred by Germany, reflected the extent to which the fear of a knock-out blow had become embedded in the military and political response to events. Sir Neville

⁷⁴ AI 3 report on 'German bombing potential', 24 Aug. 1938, Air 9/90.

⁷⁵ Memorandum by the air staff, 12 Sept. 1938, Air 9/90.

⁷⁶ CAS to AOC-in-C, bomber command, 19 Sept. 1938, CAB 27/646.

⁷⁷ 'Inner cabinet meeting', 24 Sept. 1938, CAB 27/646.

⁷⁸ Homze, *Arming the Luftwaffe*, p. 242.

Henderson, British ambassador to Berlin, expressed the conventional wisdom about the relation between the outcome of the crisis and the balance of power in the air. He wrote to the foreign secretary, Lord Halifax,

There is no doubt in my mind that Hitler's intransigence and readiness to embark on war was solely due to the conviction that Germany as a result of Goering's efforts possessed (1) an air force which in quantity and quality far surpassed anything which France and England could put up and (2) an immeasurably superior ground defence.⁷⁹

During the period 1937-8 the IIC looked, in vain, for indications that Germany had called a halt to the expansion of industry. Instead they found what they had earlier predicted, namely that Germany was intent on capturing the world market in armaments, relying on exports to prevent any slackening of production.⁸⁰ The IIC produced a remarkable document for the committee of imperial defence in May 1938 which attempted to analyse the history and rationale of the German rearmament drive. The report went back to the 1920s to explain that the foundations of the Nazi rearmament programme were laid in plans for industrial mobilization. Once rearmament was under way, Germany had to face three problems: labour supply, raw materials and finance. The German government was able to overcome these problems, the IIC believed, through wielding the powers of the totalitarian state, which it characterized as 'the rigid, centralised, government control of everything', backed by the broad consent of the nation. The essential problem which the IIC thought Germany faced in the future was how to maintain the confidence of the people in the economy. Hitler's success, they concluded, would depend on his ability to even more firmly implant in the minds of the people the psychology of guns over butter.⁸¹

IIC estimates showed that airframe and aero-engine production had risen by 30 per cent in the period May 1937 to August 1938.⁸² The German aircraft industry was continuing to work at much less than capacity, on a one-shift basis, and continued to concentrate on the expansion of industrial plant. All these factors pointed to potentially still greater expansion in the future. Some evidence, however, pointed towards a different assessment. Like the air intelligence directorate, the IIC was suffering from delays in the evaluation of its material. Although reports reached the Foreign Office as early as July 1938 about sudden measures for an increase in aircraft production, the IIC was not able to assess these until early November 1938. By that time statistics showed that German production had reached an all-time high of 1,000 planes per month, but the effort was reported to have eaten up steel stocks and put the entire economy under a strain. Subsequent to the Munich settlement, aircraft production had slumped to well below pre-July figures. The IIC concluded that the September crisis indicated that the German industrial

⁷⁹ Henderson to Halifax, 11 Oct. 1938, C14560/1425/18, F.O. 371/21710.

⁸⁰ 'German aircraft industry', CID 1339-B, 13 July 1937, CAB 4/26.

⁸¹ 'Germany: Exports of armaments', CID 1426-B, 2 May 1938, CAB 4/27.

⁸² IIC - air ministry reports on the German air force and aircraft industry: CID 1339-B, CID 1407-B, CID 1472-B, for 1937-8, CAB 4/26-7.

balance might be upset 'with unexpected rapidity'.⁸³ This conclusion foreshadowed IIC estimates in 1939.

IV

The fourth period of air intelligence, dating from the aftermath of Munich to September 1939, was a time of long 'cruise hours' for the staffs of the intelligence organizations. As war came to be regarded as inevitable and imminent, attention was focused on the present and no long-term predictions were made.

These eleven months were filled with alarms and constantly changing predictions of where Hitler might strike. Late in December 1938 the British chargé in Berlin, Ivone Kirkpatrick, was given the information that Hitler had made plans for a sudden air attack on London.⁸⁴ The air ministry reacted by parking a battery of anti-aircraft guns outside the windows of the German embassy. Kirkpatrick's report was followed by a stream of war scares. First Holland, then Switzerland, Denmark, Roumania, and Poland were signalled as countries which Hitler intended to attack. Between the real occupation of Prague in March 1939 and the mass of reports in July and August indicating that Hitler was going to strike against Poland, one further war scare directly involved the air ministry. A warning, similar to the one in December, came to the Berlin embassy stating that Hitler was preparing to launch a knock-out blow against the Fleet. The air ministry refused to believe the report and did nothing. But the Fleet was ordered on alert, the news of which reached the press after an indiscreet speech by the First Lord, who was visiting the *Ark Royal* for a film showing.⁸⁵

The intelligence picture of the German air force which developed during 1939 was a curious mixture of good and bad news. Luftwaffe strength by the end of 1939 was predicted at 3,700 first-line planes, considerably superior to the estimated combined total of British and French forces.⁸⁶ Several factors were believed to balance, somewhat, the allied inferiority in numbers. By mid 1939 the IIC were reporting that the expansion of German plant capacity had finally ceased and that Germany was concentrating on the modification of her current types of aircraft rather than introducing new ones.⁸⁷ Desmond Morton told the Foreign Office that he expected British and German aircraft production to be running 'neck and neck' by the fall and that the situation was 'very much brighter than we had supposed possible some time ago'.⁸⁸ The air attaché in Berlin was of a similar mind and sent in reports to the effect that Germany had reached the peak of her rearmament and that the situation would improve steadily for Britain after 1939.⁸⁹ The new confidence about the arms race

⁸³ Memorandum by the IIC, 2 Nov. 1938, C13557/65/18, F.O. 371/21670.

⁸⁴ Ivone Kirkpatrick, *The inner circle* (London, 1959), p. 139.

⁸⁵ D. C. Watt, *Too serious a business* (London, 1979), pp. 128-9.

⁸⁶ 'European appreciation 1939 40', COS 843, 20 Feb. 1939, CAB 53/45.

⁸⁷ 'Germany: aircraft industry', CID 1541-B, 1 Feb. 1939, CAB 4/29.

⁸⁸ Telephone conversation, Morton to Roberts, 1 Feb. 1939, C2382/11/18, F.O. 371/22956.

⁸⁹ Despatch from air attaché, Berlin, 17 Feb. 1939, C2325/11/18, F.O. 371/22956.

quickly filtered to the top. Vansittart coined the phrase '1939'ers' for those people who were optimistic about the future. Neville Chamberlain was certainly among their number. As late as July 1939 he believed that Hitler might be deterred from war. Writing to one of his sisters, he said:

One thing is I think clear namely that Hitler has concluded that we mean business and that the time is not ripe for a major war. . . . Though at present the German feeling is it is not worthwhile yet, they will soon come to realize that it never will be worthwhile, then we can talk.⁹⁰

V

What air intelligence did best, throughout the 1930s, was to compile order-of-battle information on the Luftwaffe, not a negligible accomplishment given the secrecy which surrounded its expansion. Air intelligence knew how many illegal aeroplanes the Germans had during the 1933-5 period, they were aware that Hitler was bluffing with his parity boast in March 1935, and the counts of squadrons and first-line strengths during the Munich crisis and at the outbreak of war were basically accurate.⁹¹ This achievement was considerably diminished by a poor record of predictions and the lack of any real contribution to the question of German air strategy. By failing to collect and assess the sort of intelligence, on German equipment, reserves, training and strategy, which would have enabled them to reach a decision on the capability of the Luftwaffe to deliver a knock-out blow, the air intelligence staff share responsibility for the exaggeration of German air power which was widespread in the air ministry, the cabinet and among the public. In the absence of hard information about capabilities, the air staff assumed the 'worst case' – that Germany might try for the knock-out blow.

A recapitulation of the air intelligence predictions shows the importance of the year 1936 as a turning point in air staff thinking about the future of the German air force. The earliest predictions put the size of the German air force at a maximum of 1,000 planes by 1939. Up until September 1936 the estimate was locked at 1,500 in 1939. Thereafter, predictions of the future size of the German air force rose rapidly and gained in accuracy. When 1939 arrived, the air intelligence directorate believed Germany was aiming at 3,700 planes by the end of the year. When war broke out the actual German strength was 3,647.⁹²

The poor quality of long-range intelligence predictions on the German air force, which characterized the air ministry effort until at least September 1936, represented a distinct and important failure which cannot be attributed solely to the inherent difficulty of the crystal ball. The Luftwaffe was a true child

⁹⁰ Cited in Martin Gilbert, *Winston S. Churchill*, v, 1011.

⁹¹ This conclusion is supported by comparison between air intelligence estimates and the published figures in: E. L. Homze, *Arming the Luftwaffe*; H. Schliephake, *The birth of the Luftwaffe*; and R. Suchenwirth, *The development of the German air force*. See also Hinsley, *British intelligence*, 1, 75.

⁹² Hinsley, *ibid.*

of the Nazi state, a product of Hitler's and Goering's desire to build the biggest air force possible in the shortest space of time.⁹³ By September 1939 the Luftwaffe had proved its usefulness as a terror weapon in diplomacy but was unready for war, being notably short of reserves and trained aircrew.⁹⁴ Air intelligence failed to see the weak sinews beneath the strong-man façade of the Nazi state. The German air force and the industry which supplied it were often described in terms of 'efficiency, discipline, love of order' because these were seen as the characteristics of the Germans. Everything was new, lavishly financed and planned on a monumental scale. Barracks and factories were microcosms of the new architecture which Hitler and Speer planned for Germany. British industrialists visiting Germany were overwhelmed by what they saw. Sir Roy Fedden, managing director of Bristol aircraft, returned from a tour of Germany in 1937 to report 'the aircraft production factories . . . are extensive, modern, highly organised plants, of which we have nothing comparable in this country, and, with one or two notable exceptions, the corresponding layout of any one unit of British industry can only be described as obsolete and inadequate'.⁹⁵ The image of German efficiency was linked to a picture of a society closely regimented under Nazi rule. IIC reports, between 1936 and 1939, exposed some of the weak points in the German economic structure but the image remained overblown. One statement which figured in all the chiefs of staff's appreciations of war against Germany was that a totalitarian government enjoyed crucial advantages in preparing a country for war.

A second factor which hindered accurate predictions of German air force expansion involved personalities inside the air ministry. Incompetence crept into the work of the air intelligence directorate, largely due to a lack of money and a policy of hiring retired officers to fill directorate positions, whose qualifications were often limited to a knowledge of the language of the country being studied. The senior staff of the air ministry, especially during the tenure of Air Chief Marshal Sir Edward Ellington, practised an optimism about the future which was at odds with the Foreign Office's reading of the situation. They refused to accept, until midway through the decade, that war with Germany might be possible.

Bitterness and mistrust divided the air ministry from the Foreign Office throughout the 1930s. This did not prevent the interchange of information, but it did seriously weaken the co-ordination of military and political intelligence at the highest levels. The air ministry resented Foreign Office criticism and Foreign Office trespass on their sole right to interpret German air force intelligence. The astonishing rigidity of early air intelligence estimates can partly be explained as a hedgehog response to attack from other departments of state.

⁹³ R. Overy, 'Hitler and air strategy', *Journal of Contemporary History*, xv, 3 (1980), 409.

⁹⁴ Williamson Murray, 'German air power', pp. 113-14.

⁹⁵ 'Précis of reports on visits to Germany June 7-11 and Sept 2-12 1937 by A. H. R. Fedden' contained in cabinet supplementary registered file, CAB 104/32.

There was little co-ordination, either, between military and economic intelligence in the sense that it was not until the late 1930s that the air intelligence directorate turned to the IIC's analysis of the German aircraft industry for clues as to what expansion the German air force might be planning. The series of IIC reports were consistent in their emphasis on the great capacity of Germany. The IIC concentrated on giving accurate statistics on the German aircraft industry and in searching for limiting factors to its output. But the IIC did not make predictions (why not is unclear) and some government advisers thought that it overestimated the advantages of a totalitarian state in rearmament.⁹⁶

The impact of the intelligence failure on government policy is most obvious in relation to the expansion schemes adopted for the RAF. Under-estimates of the future size of the Luftwaffe led to the building of an underweight RAF. By 1939, whatever indications were available that the balance of power in the air was beginning to improve (and these included not only the IIC's good news about British production catching the German figures, but also the acquisition of a string of radar sites, the post-Munich enlargement of the fighter force, and improvements in the air raid defence), it was clear that Britain had lost the 'Thirties air arms race and could not hope to deter Germany on the strength of the RAF's offensive force. Financial restrictions, problems of supply, and poor co-operation between industry and government all played a role in this state of affairs.⁹⁷ So too did the early air intelligence predictions, which by underestimating the pace at which the Luftwaffe would be built, failed to supply the spark for greater urgency in RAF expansion. Air intelligence failed to warn the cabinet soon enough about what might be needed to deter Hitler, nor did they provide any realistic picture of what Hitler's air force might be capable of doing if the deterrent proved unsuccessful.

It was symptomatic of British perceptions of Nazi Germany that air intelligence officers failed to climb into the skulls of their German opponents. In the evolving picture of the German air force certain tenacious but misapplied assumptions – especially those of the 'worst case' and German 'efficiency' – played as important a part as the available information.

⁹⁶ Hankey caused the IIC estimate of German industrial strength to be removed from the JPC report, 'Appreciation of the situation in the event of war with Germany', DCOS 9th meeting, 19 Nov. 1936, CAB 54/1.

⁹⁷ Robert Shay, *British rearmament in the thirties* (Princeton, 1977), pp. 294–5; see also G. C. Peden, *British rearmament and the Treasury* (Edinburgh, 1979).

THE SECRET COLD WAR: THE C.I.A. AND AMERICAN FOREIGN POLICY IN EUROPE 1946–1956. PART II*

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I

The C.I.A. was taxed with five major intelligence failures by the influential *New York Herald Tribune* on 2 August 1950. This newspaper article was only part of a widespread campaign to reorganize the C.I.A. The concern of the C.I.A. director, Admiral Roscoe Hillenkoetter, over the allegations was so acute that on the following day he prepared an apologia sent to President Truman.¹ Three of the alleged failures of prediction concerned the defeat of the Chinese Nationalists, events in Palestine and the 1948 Bogota conference – the last now largely forgotten but the cause of great contemporary scandal when Secretary of State Marshall was attacked by a mob. The other two were in Europe. They were the inability to predict the fall of Czechoslovakia and the defection of Tito. Blaming the C.I.A. for not predicting the communist coup in Czechoslovakia was unfair, but there was more substance to the accusation concerning Yugoslavia.

In 1947 an alert C.I.A. should already have noted the growing tension between the Russians and Tito caused by the Soviets using joint stock companies to mulct the Yugoslav economy. There were also the valuable papers of an Eastern European chief of mission dating from August 1947 which had talked (ambiguously) about the necessity of crushing 'Balkan nationalism'.² By February the next year Stalin became convinced Tito wished to challenge Russia, a bitter exchange of letters ensued and the Moscow propaganda machine launched an acrid denunciation of Tito. It seems the highest echelons of East European communist parties knew of Tito's approaching expulsion from the Cominform at about this time, but the C.I.A. gave the first hint of trouble only in May, when a report noted that Tito was purging his party of 'diversionists'.³ These of course were the supporters of Stalin who were sapping Tito's authority in the Yugoslav communist party.

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¹ 'Rebuttal to *New York Herald Tribune* allegations of intelligence failures', ER 1-1768, Hillenkoetter to president, 3 August 1950, Truman library, Truman papers, president's secretary's files (henceforth PSF).

² See Trevor Barnes, 'The secret cold war: the C.I.A. and American foreign policy in Europe, 1946–1956. Part I', *Historical Journal*, xxiv (1981), 399–415.

³ Quoted in C.I.A. 7-48, 14 July 1948, PSF.